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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,359	12/16/2003	Jun Gi Choi	29936/39893	6016

4743 7590 12/10/2004

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EXAMINER

NGUYEN, LONG T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/737,359

Applicant(s)

CHOI ET AL.

Examiner

Long Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: INTERNAL VOLTAGE GENERATING CIRCUIT FOR GENERATING A CONSTANT VOLTAGE.

2. The disclosure is objected to because of the following informalities: throughout the specification, it is suggested that the recitation "active driver" be changed to --internal voltage generating circuit-- to avoid a confusion because it is well known in the art that the circuits in Figures 1 and 2 are internal reference/regulation voltage generation circuits, and are not driver circuits since there is no input data/signals to be driven. Appropriate correction is required.

Claim Objections

3. Claims 1-9 are objected to because of the following informalities:

Claims 1-9, "active driver" is suggested to be changed to --internal voltage generating circuit-- for the similar reason as discussed above with regard to the specification's objection.

Also in claim 1, line 4, "outputting; and" should be changed to --outputting the internal voltage--.

Also in claim 1, line 6, "generated by detecting" should be changed to --generated by means for detecting-- to avoid lacking antecedent basis problem in claim 5.

Also in claim 2, line 1, "the internal voltage" should be changed to --the at least one internal voltage-- for consistency (see line 5 of claim 1).

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Also in claim 2, line 4, it is suggested “a signal to control the” be changed to --a signal wherein the signal is also controlling the-- so that the claim is clear.

Also in claim 2, it is suggested to change “for transferring the power supply voltage transferred through the switching unit.” on line 5-6 to --for receiving the power supply voltage transferred through the switching unit for stabilizing the internal voltage to said constant voltage level.-- since the power supply voltage cannot be transferring to the internal voltage due to the drop across the sub-driver.

Also in claim 4, line 2, “the unit” should be changed to --the internal voltage-generating unit-- to avoid unclear antecedent basis problem.

Also in claim 5, line 5, “the output” should be changed to --an output-- to avoid lacking antecedent basis problem.

Also in claim 5, line 6, “the output” should be changed to --an output-- to avoid lacking antecedent basis problem.

Also in claim 7, line 4, “the output” should be changed to --an output-- to avoid lacking antecedent basis problem.

Also in claim 7, line 5, “outputting.” should be changed to --outputting the output of the detection unit--.

Also in claim 9, line 10, “the active signal” should be changed to --an active signal-- to avoid lacking antecedent basis problem.

Also in claim 9, line 11, “outputting; and” should be changed to --outputting an output signal of the latch unit--.

Also in claim 9, line 12, “an output” should be changed to --the output--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamauchi et al. (USP 6,717,460).

With respect to claims 1 and 4, Figure 24 of the Yamauchi et al. reference discloses a circuit, which includes: an internal voltage-generating unit (961-964) for converting an external power supply voltage (EXVDD) into an internal voltage (Vddp) according to a reference voltage (Vrefp) and outputting the internal voltage; and at least one internal voltage drop control unit (966) that operates by an enable signal (output of 965) by detecting a voltage level of the internal voltage (Vddp) for stabilizing the internal voltage to a constant voltage level (see line 60 of Col. 4 to line 12 of Col. 5 for more detail). Note that the internal voltage-generating unit (961-964) is operated according to an active control signal (ACT).

6. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto et al. (USP 6,809,577).

With respect to claim 1, Figure 5 of the Matsumoto et al. reference discloses a circuit, which includes: an internal voltage-generating unit (13-16 and 18) for converting an external power supply voltage (VDD) into an internal voltage (VDL) according to a reference voltage

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(Vref) and outputting the internal voltage; and at least one internal voltage drop control unit (17 and 19) that operates by an enable signal (ODE) by detecting a voltage level of the internal voltage (VDL) for stabilizing the internal voltage to a constant voltage level (see line 48 of Col. 8 to line 8 of Col. 9 for more detail).

With respect to claim 2, Figure 5 shows the at least one internal voltage drop control unit (17, 19) including a switching unit (19) operated by the enable signal (ODE), and a sub-driver (17) operated by a signal (DRV) wherein the signal (DRV) also controlling the operation of an output driver (18) of the internal voltage-generating unit (13-16, 18) for transferring the power supply voltage (VDD) transferred through the switching unit.

With respect to claim 3, Figure 5 shows the sub-driver (19) is a PMOS transistor.

Allowable Subject Matter

7. Claims 5-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and if amended to overcome the informalities as suggested above.

Claim 5 would be allowed because the prior art of record fails to disclose or suggest all the limitations of this claim. In particular, the prior of record fails to disclose or suggest that the means for generating the enable signal comprising a detection unit, a voltage booster unit, and an output unit with the recited connections and operations set forth therein.

Claims 6-9 would be allowed because they depend on claim 5.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directly to Examiner Long Nguyen whose telephone number is (571) 272-1753. The Examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (571) 272-1740. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 2, 2004



Long Nguyen
Primary Examiner
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